Docket 03280088AA Serial No.: 10/658,712

2

Amendments to the Specification:

Please replace the paragraph on page 1, lines 9 to 23, with the following rewritten paragraph:

A line-scan inkjet recording device has been know known for printing images on a continuous recording sheet at high speeds. The line-scan inkjet recording device includes an inkjet recording head that extends across the entire width of the continuous recording sheet. The inkjet recording head is formed with a row of orifices through which ink droplets are ejected. The recording head is aligned in confrontation with a surface of the recording sheet. The recording sheet is transported in a main scan direction rapidly while the recording head is ejecting ink droplets from selective ones of the orifices in accordance with a recording signal. By transporting the recording sheet in the main scan direction while ejecting ink in this manner, recording dots can be selectively formed in scan lines on the recording sheet to produce a desired recording image.

Please replace the paragraph starting on page 2, lines 17 to 25, and continuing on page 3, lines 1 to 14, with the following rewritten paragraph:

Some nozzles of the drop-on-demand line-scan inkjet recording head will not be fired for long periods of time because ink droplets are only ejected as needed to form recording dots in accordance with recording data. If nozzles are not fired for long periods of time, then ink near the nozzle orifice can dry. This unstabilizes ink ejection performance. In order to overcome this problem, the present applicant has proposed to dispose a charge deflecting electrode on the surface of each head module in U.S. Patent Application No. 10/363,822, now U.S. Patent No. 6,796,632 to Yamada et al. issued September 28, 2004. Each charge deflecting electrode is oriented parallel with the corresponding nozzle row and includes an ink receiving portion. The charge deflecting electrodes generate a

Docket 03280088AA Serial No.: 10/658,712

slanted electric field that deflects ink droplets from the nozzle orifices to impinge on a desired location of the recording sheet. The slanted electric field also deflects refresh ink droplets from the nozzle orifices to U-turn away from the recording sheet and impinge on the ink receiving portion, where the ink is collected. By selectively ejecting refresh ink droplets in this manner, the problem of ink near the nozzle orifices becoming excessively viscous can be prevented so that ink ejection can be maintained stable.

Please replace the paragraph on page 4, lines 11 to 19, with the following rewritten paragraph:

However, the above-described purge unit cannot be easily used for the recording head described in U.S. Patent Application No. 10/363,822 No. 6,796,632. That is, the surface of the charge deflecting electrode is higher than the nozzle surface, so there is a level difference between the nozzle surface and the charge deflecting electrode that follows the nozzle orifice rows. This level difference makes difficult to side the blades around the nozzle orifices to restore the meniscus in the nozzle orifices.

Please replace the paragraph starting on page 13, lines 24 to 25, and continuing on pages 14, 15, lines 1 to 3, with the following rewritten paragraph:

Next, cleaning operations of the cleaning device 90 will be described. First, the head retracting mechanism 40 moves the recording head 1 from the recording position shown in Fig. 1 to the cleaning position shown in Fig. 2. Next, while the negative pressure generator 55 generates a suction at the suction hole 51, the X-axis movement stage 411X and/or the Y-axis movement stage 411Y move the suction tube 50 to position the suction hole 51 below the nozzle orifice 12 and the electrode/ink reception member 11. Then, the suction hole approach mechanism 412 moves upward in the vertical direction Z to press the suction tube

Docket 03280088AA Serial No.: 10/658,712

4

so against the step between the orifice plate 13 and the electrode/ink reception member 11 by a force that seal seals he suction tube 50 against the orifice plate 13 and the electrode/ink reception member 11 except for a gap 511 shown in Fig. 5. The gap 511 includes a broad section 511L and a narrow section 511S. As viewed from the nozzle orifice 12, the broad section 511L is located at the side of the gap 511 nearest the electrode/ink reception member 11, and the narrow section 511S is located at the opposite side. Therefore, if the center of the nozzle orifice 12 is considered the center of the gap 511, the gap 511 is asymmetrical about the nozzle orifice 12 in a direction M, that is, asymmetrical about the nozzle orifice row L. Then, the Y-axis movement stage 411Y moves the suction tube 50 in the Y-axis direction, that is, in the nozzle orifice row direction N, so that the suction tube 50slides across the orifice surface 13A of the orifice plate 13 and the electrode/ink reception member 11 following the nozzle orifice row L, thus cleaning all of the nozzle orifices 12.

Please replace the paragraph starting on page 15, lines 4 to 25, and continuing on page 16, lines 1 to 7, with the following rewritten paragraph:

During the cleaning operation, a negative pressure of 20kPa operates on the nozzle orifice 12 being suctioned by the suction hole 51, so that air bubbles or ink that has become excessively viscous due to drying of the ink are sucked out from the nozzle orifice 12 and replaced with fresh ink. At the same time, an air flow 56 is generated as air enters through the gap 511 due to the negative pressure suction force in the suction hole 51. The different sizes of the broad section 511L and the narrow section 511S result in different flow velocity velocities and flow rate rates in the air flow 56 at the difference different sections of the gap 511. That is, the distribution of flow velocity velocities and flow rate rates in the air flow 56 is asymmetrical about the nozzle orifice 12 in the direction M. In other words, the distribution of flow velocity velocities and flow rate rates in the air flow 56 is asymmetrical about the nozzle orifice row L. As a result, a whirlpool-

shaped suction flow (spiraling current) 57 is formed in the vicinity of the suction hole 51. The whirlpool-shaped suction flow 57 includes a mixture of air and ink, forcibly pulls foreign matter away from the electrode/ink reception member 11 and the vicinity of the nozzle orifices 12, and washes off the foreign matter and the like from the electrode/ink reception member 11 or the nozzle orifice 12 with ink sucked from the nozzle orifice 12. The foreign matter is then sucked into the suction tube 50 and collected in the ink collection tank 54 through the tube 53. After the suction tube 50 is slid to the end of the nozzle orifice row L, a meniscus is formed from fresh ink in the nozzle orifice 12, thereby completing the purge and wipe operations.